



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,360	10/05/2000	Hans Carlsson	P12519-US1-BMOA	8084
26615	7590	02/24/2005	EXAMINER	
HARRITY & SNYDER, LLP 11240 WAPLES MILL ROAD SUITE 300 FAIRFAX, VA 22030			MILLS, DONALD L	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/679,360

Applicant(s)

CARLSSON ET AL.

Examiner

Donald L Mills

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-57, 83 and 87-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 87-91 is/are allowed.
- 6) ☒ Claim(s) 1-57, 83 and 92 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-57, 83, and ~~92~~ 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raith (US 5,546,443) in view of Hill et al. (US 5,857,155), hereinafter referred to as Hill.

Regarding claims 1, 14, 27, and 92, Raith discloses a communication management technique and system for radio-telephone systems including microcells, which comprises:

*Switching from the first control channel to a second control channel* (Referring to Figure 4, mobile 170 switches control channels based on which channel is strongest. See column 11, lines 61-66.)

Raith does not disclose *a second control channel from which a relationship to GPS time is available; acquiring the GPS time to second control time relationship; and determining the GPS time using the relationship.*

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper

Art Unit: 2662

synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 2, 15, and 28 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *switching after acquiring the GPS time to second control channel time relationship, from the second control channel back to the first control channel.*

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith and switch channels back to the first channel when the first channel has a stronger signal. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22,) and receive the control channel with the greatest signal strength.

Regarding claims 3, 16, and 29 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *wherein the second control channel is a digital control channel and the first control channel is an Enhanced General Packet Radio Service packet control channel.*

Raith teaches switching between control channels depending upon the signal strength (See column 11, lines 61-66.)

Art Unit: 2662

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement a DCCH and an EGPRS control channel in the system of Raith. One of ordinary skill in the art would have been motivated to do so in order to comply with GSM/EDGE standards. An added benefit of doing so would result in a smooth transition to well known standards.

Regarding claims 4, 17, 30, 43, 49, and 55, the primary reference further teaches *determining whether a preferred second control channel can be found, and switching to the preferred second control channel when the preferred second control channel can be found* (Referring to Figure 4, mobile 170 switches control channels based on which channel is strongest, in which the location of second control channel is known and then switched to when necessary. See column 11, lines 61-66.)

Regarding claims 5, 18, 31, 44, 50, and 56, the primary reference further teaches *identifying a second control channel from a pointer list when the preferred second control channel cannot be found, and switching to the identified second control channel from the pointer list* (Referring to Figure 4, mobile 170 switches control channels based on which channel is strongest, in which the location of second control channel is known in memory, a pointer, and then switched to when necessary. See column 11, lines 61-66.)

Regarding claims 6, 19, and 32 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *acquiring time information associated with the second control channel*.

Art Unit: 2662

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 7, 20, and 33 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *determining the GPS time using the relationship and acquired time information.*

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 8, 21, and 34 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *determining prior to the switching from the first control channel to a second control channel from which a relationship to GPS time is available, a time period on the second control channel that will contain the relationship.*

Raith teaches switching between control channels depending upon the signal strength, the second control always being available (See column 11, lines 61-66.) Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 9, 22, and 35, the primary reference further teaches *switching from the first control channel to the second control channel just prior to an occurrence of the time period* (Referring to Figure 4, switching between control channels depending upon the signal strength, the second control always being available, the switching process happening prior to the occurrence of the next power inequality between control channels. See column 11, lines 61-66.)

Regarding claims 10, 23, and 36, the primary reference further teaches *switching back to the first control channel after the occurrence of the time period* (Referring to Figure 4, switching between control channels depending upon the signal strength, the switching back to the first control channel with the signal strength of the second control channel is less than the first. See column 11, lines 61-66.)

Art Unit: 2662

Regarding claims 11, 24, and 37 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *receiving the relationship in at least one broadcast message*.

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill with broadcast transmission in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith for multiple mobiles (See column 12, lines 20-22.)

Regarding claims 12, 25, and 38 as explained in the rejection statement of claims 1, 14, and 27; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *receiving the relationship via point-to-point messaging*.

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill with point-to-point transmission in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith for systems with a limited number of subscribers (See column 12, lines 20-22.)



Art Unit: 2662

Regarding claims 13, 26, 39, 45, 51, and 57 as explained in the rejection statement of claims 1, 14, 27, 40, 46, and 52; Raith and Hill teach all of the claim limitations of claims 1, 14, 27, 40, 46, and 52 (parent claims).

Raith does not disclose *the switching from the first control channel to the second control channel occurs in response to at least one of a timeout signal and a position request.*

Raith teaches switching between control channels depending upon the signal strength, the second control always being available (See column 11, lines 61-66.) Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith with a time out period. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22,) and ensure proper channel switching when channels become unavailable.

Regarding claims 40, 46, 52, and 83, Raith discloses a communication management technique and system for radio-telephone systems including microcells, which comprises:

*Transmitting a request, the request specifying a second control channel with which the mobile terminal is associated* (Referring to Figure 4, mobile 170 switches control channels based on which channel is strongest based upon a call access request. See column 11, lines 61-66.)

Raith does not disclose *a GPS time to second control channel time relationship; receiving a value indicative of the relationship between GPS time and a time for the second*

Art Unit: 2662

*control channel with which the mobile terminal is associated; and determining the GPS time using the received value.*

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement a request for GPS time utilizing the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 41, 47, and 53 as explained in the rejection statement of claims 40, 46, and 52; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *switching, prior to the transmitting a request for a GPS time to second control channel time relationship via the first control channel, from the first control channel to the second control channel associated with the mobile terminal; measuring a time on the second control channel; and switching from the second control channel back to the first control channel.*

Raith teaches switching between control channels depending upon the signal strength, the second control always being available (See column 11, lines 61-66.) Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement a channel switch prior to a request for GPS time utilizing the GPS receiver of Hill

Art Unit: 2662

in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

Regarding claims 42, 48, and 54 as explained in the rejection statement of claims 40, 46, and 52; Raith and Hill teach all of the claim limitations of claims 1, 14, and 27 (parent claims).

Raith does not disclose *determining the GPS time using the received value and the measured time.*

Hill teaches utilizing GPS information to maintain synchronization at the subscriber, since the GPS information includes an accurate time (See column 4, lines 32-35.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the GPS receiver of Hill in the system of Raith. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to maintain proper synchronization between the mobiles and base stations when simulcasting control channels as taught by Raith (See column 12, lines 20-22.)

### ***Allowable Subject Matter***

3. Claims 87-91 are allowed.

### ***Conclusion***

Art Unit: 2662

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



February 17, 2005



**JOHN PEZZLO**  
**PRIMARY EXAMINER**